STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JOHN ELIAS BALDACCI
GOVERNOR

November 23, 2005

DAWN R. GALLAGHER
COMMISSIONER

Mr. Robert Kane
Town of Bar Harbor
Bar Harbor Wastewater Treatment Facility – Main Plant
93 Cottage Street
Bar Harbor, ME 04609

RE: Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0101214
Maine Waste Discharge License (WDL) Application #W002591-5L-F-R
Final Permit/License – Main Plant

Dear Mr. Kane:

Enclosed, please find a copy of your **final** MEPDES permit and Maine WDL which was approved by the Department of Environmental Protection. Please read the permit/license and its attached conditions carefully. You must follow the conditions in the order to satisfy the requirements of law. Any discharge not receiving adequate treatment is in violation of State law and is subject to enforcement action.

Any interested person aggrieved by a Department determination made pursuant to applicable regulations, may appeal the decision following the procedures described in the attached DEP FACT SHEET entitled "*Appealing a Commissioner's Licensing Decision.*"

We would like to make you aware of the fact that your monthly Discharge Monitoring Reports (DMRs) may not reflect the revisions in this permitting action for several months however, you are required to report applicable test results for parameters required by this MEPDES permit/WDL that do not appear on the DMR. Please see attached April 2003 O&M Newsletter article regarding this matter.

If you have any questions regarding the matter, please feel free to call me at 287-7659.

Sincerely,

Bill Hinkel
Division of Water Resource Regulation
Bureau of Land and Water Quality

Enc.
cc: Clarissa Trasko, DEP
Roger Janson, USEPA

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688
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BANGOR, MAINE 04401
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PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04769-2094
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DMR Lag

When the Department renews discharge permits, the parameter limits may change or parameters may be added or deleted. In some cases, it is merely the replacement of the federally issued NPDES permit with a state-issued MEPDES permit that results in different limits. When the new permit is finalized, a copy of the permit is passed to our data entry staff for coding into EPA's Permits Compliance System (PCS) database. PCS was developed in the 1970's and is not user-friendly. Entering or changing parameters can take weeks or even months.

This can create a lag between the time your new permit becomes effective and the new permit limits appearing on your DMRs. If you are faced with this, it can create three different situations that have to be dealt with in different ways.

1. If the parameter was included on previous DMRs, but only the limit was changed, there will be a space for the data. Please go ahead and enter it. When the changes are made to PCS, the program will have the data and compare it to the new limit.

2. When a parameter is eliminated from monitoring in your new permit, but there is a delay in changing the DMR, you will have a space on the DMR that needs to be filled. For a parameter that has been eliminated, please enter the space on the DMR for that parameter only with "NODI-9" (No Discharge Indicator Code #9). This code means monitoring is conditional or not required this monitoring period.

3. When your new permit includes parameters for which monitoring was not previously required, and coding has not caught up on the DMRs, there will not be any space on the DMR identified for those parameters. In that case, please fill out an extra sheet of paper with the facility name and permit number, along with all of the information normally required for each parameter (parameter code, data, frequency of analysis, sample type, and number of exceedances). Each data point should be identified as monthly average, weekly average, daily max, etc. and the units of measurement such as mg/L or lb/day. Staple the extra sheet to the DMR so that the extra data stays with the DMR form. Our data entry staff cannot enter the data for the new parameters until the PCS coding catches up. When the PCS coding does catch up, our data entry staff will have the data right at hand to do the entry without having to take the extra time to seek it from your inspector or from you.

EPA is planning significant improvements for the PCS system that will be implemented in the next few years. These improvements should allow us to issue modified permits and DMRs concurrently. Until then we appreciate your assistance and patience in this effort.

Phil Garwood

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
STATE HOUSE STATION 17 AUGUSTA, MAINE 04333

DEPARTMENT ORDER

IN THE MATTER OF

TOWN OF BAR HARBOR	)	MAINE POLLUTANT DISCHARGE
BAR HARBOR, HANCOCK COUNTY, MAINE	)	ELIMINATION SYSTEM PERMIT
PUBLICLY OWNED TREATMENT WORKS	)	AND
#ME0101214	)	WASTE DISCHARGE LICENSE
#W002591-5L-F-R **APPROVAL**	)	**RENEWAL**
Main Plant		

Pursuant to the provisions of the Federal Water Pollution Control Act, Title 33 USC, Section 1251, *et seq.* and Maine law, 38 M.R.S.A., Section 414-A *et seq.*, and applicable regulations, the Department of Environmental Protection (Department) has considered the application of the TOWN OF BAR HARBOR (Town), with its supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

APPLICATION SUMMARY

The Town has applied for renewal of Department Waste Discharge License (WDL) #W002591-5L-D-R issued on December 14, 2000, and subsequent WDL Modification #W002591-5L-E-M / Maine Pollutant Discharge Elimination System (MEPDES) permit #ME0101214 issued on August 28, 2001. The 8/28/01 MEPDES permit is scheduled to expire on December 14, 2005, the expiration date associated with the 12/14/00 WDL. The 8/28/01 MEPDES permit authorized the monthly average discharge of up to 2.0 million gallons per day (MGD) of secondary treated sanitary wastewater from the Town's Main Plant, and an unspecified quantity of excess combined sanitary and storm water during wet weather events from four (4) combined sewer overflow (CSO) outfalls to the Atlantic Ocean at Frenchman Bay, Class SB, in Bar Harbor, Maine.

PERMIT SUMMARY

This permitting action is similar to the 8/28/01 permitting action in that it is:

1. Carrying forward the monthly average discharge flow limit of 2.0 MGD and the daily maximum discharge flow reporting requirement;

2. Carrying forward authorization to discharge an unspecified quantity of excess combined sanitary and storm water during wet weather events from three (3) combined sewer overflow (CSO) outfalls identified as Outfalls #004, #006, and #007;

3. Carrying forward the monthly average, weekly average and daily maximum technology-based concentration and mass limits for biochemical oxygen demand (BOD_5) and total suspended solids (TSS);

4. Carrying forward the requirement for a minimum of 85% removal of BOD_5 and TSS;

5. Carrying forward the daily maximum technology-based concentration limit for settleable solids;

6. Carrying forward the seasonal monthly average and daily maximum concentration limits for fecal coliform bacteria;

7. Carrying forward the technology-based monthly average concentration limit for total residual chlorine (TRC);

8. Carrying forward the pH range limit of 6.0 to 9.0 standard units (SU);

9. Carrying forward authorization to accept and introduce into the treatment works a daily maximum of up to 4,000 gallons per day of septage wastes from local haulers; and

10. Carrying forward the minimum monitoring frequency requirements for all monitored parameters.

PERMIT SUMMARY (cont'd)

This permitting action is different from the 8/28/01 permitting action in that it is

1. Revising surveillance and screening level whole effluent toxicity (WET) and priority pollutant testing requirements and test organisms based on revised "toxics" rule, Chapter 530;

2. Eliminating the chronic limit of 3% for the sea urchin based on results of facility testing;

3. Establishing reduced surveillance level WET testing based on the results of facility testing, and establishing Special Condition N, *Chapter 530(2)(D)(4) Statement for Reduced Toxics Testing*;

4. Establishing analytical chemistry testing pursuant to revised "toxics" rule Chapter 530;

5. Revising the daily maximum, water quality-based concentration limit for TRC based on a revised acute dilution factor;

6. Revising the daily maximum water quality-based concentration and mass limits for total copper based on current acute ambient water quality criterion for copper;

7. Revising the monthly average concentration and mass limits for total arsenic based on current human health-based ambient water quality criterion for arsenic;

8. Establishing a requirement to perform three priority pollutant tests at a frequency of once per calendar quarter for the first three quarters of the effective date of this permit to fulfill the testing requirements established by the previous permitting action; and

9. Removing the Albert Meadow pump station (Combined Sewer Overflow point 005) from the CSO Program.

CONCLUSIONS

BASED on the findings in the attached Fact Sheet dated November 21, 2005, and subject to the Conditions listed below, the Department makes the following conclusions:

1. The discharge, either by itself or in combination with other discharges, will not lower the quality of any classified body of water below such classification.

2. The discharge, either by itself or in combination with other discharges, will not lower the quality of any unclassified body of water below the classification which the Department expects to adopt in accordance with state law.

3. The provisions of the State's antidegradation policy, 38 M.R.S.A. §464(4)(F), will be met, in that:

   (a) Existing in-stream water uses and the level of water quality necessary to protect and maintain those existing uses will be maintained and protected;

   (b) Where high quality waters of the State constitute an outstanding national resource, that water quality will be maintained and protected;

   (c) The standards of classification of the receiving water body are met or, where the standards of classification of the receiving water body are not met, the discharge will not cause or contribute to the failure of the water body to meet the standards of classification;

   (d) Where the actual quality of any classified receiving water body exceeds the minimum standards of the next highest classification that higher water quality will be maintained and protected; and

   (e) Where a discharge will result in lowering the existing water quality of any water body, the Department has made the finding, following opportunity for public participation, that this action is necessary to achieve important economic or social benefits to the State.

4. The discharge (including the three CSO points) will be subject to effluent limitations that require application of best practicable treatment as defined in Maine law, 38 M.R.S.A., §414-A(1)(D).

ACTION

THEREFORE, the Department APPROVES the above noted application of the TOWN OF BAR HARBOR to discharge a monthly average flow of up to 2.0 million gallons per day of secondary treated municipal wastewater from the Town's Main Plant to the Atlantic Ocean at Frenchman Bay, Class SB, in Bar Harbor Maine, and an unspecified quantity of untreated excess combined sanitary and storm water from three (3) combined sewer overflow (CSO) points during wet weather events to the Atlantic Ocean at Frenchman Bay, Class SB, and Eddie Brook, Class B, in Bar Harbor Maine, SUBJECT TO THE ATTACHED CONDITIONS, and all applicable standards and regulations including:

1. "Maine Pollutant Discharge Elimination System Permit Standard Conditions Applicable To All Permits," revised July 1, 2002, copy attached.

2. The attached Special Conditions, including any effluent limitations and monitoring requirements.

3. The expiration date of this permit is five (5) years from the date of signature below.

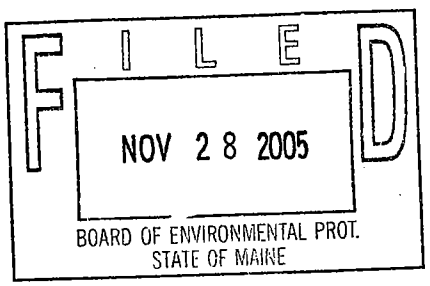
DONE AND DATED AT AUGUSTA, MAINE, THIS 21st DAY OF November, 2005.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
DAWN R. GALLAGHER, Commissioner

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: August 26, 2005
Date of application acceptance: August 29, 2005



Date filed with Board of Environmental Protection: _____.

This Order prepared by William F. Hinkel, BUREAU OF LAND & WATER QUALITY
#ME0101214 / #W002591-5L-F-R November 21, 2005

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning the effective date of this permit and lasting through permit expiration, the permittee is authorized to discharge **secondary treated sanitary wastewater from Outfall #001A** and **Outfall #001B**[1] to the Atlantic Ocean at Frenchman Bay in Bar Harbor, Maine. Such discharges shall be limited and monitored by the permittee as specified below[2]:

Effluent Characteristic	Discharge Limitations						Minimum Monitoring Requirements	
	Monthly Average as specified	Weekly Average as specified	Daily Maximum as specified	Monthly Average as specified	Weekly Average as specified	Daily Maximum as specified	Measurement Frequency as specified	Sample Type as specified
Flow *[50050]*	2.0 MGD *[03]*	---	Report, MGD *[03]*	---	---	---	Continuous *[99/99]*	Recorder *[RC]*
BOD_5 *[00310]*	500 lbs./day *[26]*	750 lbs./day *[26]*	834 lbs./day *[26]*	30 mg/L *[19]*	45 mg/L *[19]*	50 mg/L *[19]*	3/Week *[03/07]*	24-Hour Composite *[24]*
BOD_5 Percent Removal[3] *[81010]*	---	---	---	85% *[23]*	---	---	1/Month *[01/30]*	Calculate *[CA]*
TSS *[00530]*	500 lbs./day *[26]*	750 lbs./day *[26]*	834 lbs./day *[26]*	30 mg/L *[19]*	45 mg/L *[19]*	50 mg/L *[19]*	3/Week *[03/07]*	24-Hour Composite *[24]*
TSS Percent Removal[3] *[81011]*	---	---	---	85% *[23]*	---	---	1/Month *[01/30]*	Calculate *[CA]*
Settleable Solids *[00545]*	---	---	---	---	---	0.3 ml/L *[25]*	1/Day *[01/01]*	Grab *[GR]*
Fecal coliform bacteria[4] *[31616]*	---	---	---	15/100 ml[5] *[13]*	---	50/100 ml *[13]*	3/Week *[03/07]*	Grab *[GR]*
Total Residual Chlorine[6] *[50060]*	---	---	---	0.1 mg/L *[19]*	---	0.21 mg/L *[19]*	2/Day *[02/01]*	Grab *[GR]*
pH *[00400]*	---	---	---	---	---	6.0 – 9.0 SU *[12]*	1/Day *[01/01]*	Grab *[GR]*
Total Copper *[01042]*	---	---	1.3 lbs./day *[26]*	---	---	107 µg/L *[28]*	1/Year *[01/YR]*	24-Hour Composite *[24]*
Total Arsenic *[01002]*	0.05 lbs./day *[26]*	---		3.2 µg/L *[28]*	---	---	1/Year *[01/YR]*	24-Hour Composite *[24]*

The italicized numeric values bracketed in the table and in subsequent text are code numbers that Department personnel utilize to code the monthly Discharge Monitoring Reports.

FOOTNOTES: See Pages 9 through 12 of this permit for applicable footnotes.

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

2. SURVEILLENCE LEVEL TESTING. During the period **beginning the effective date of this permit and lasting through 12 months prior to permit expiration** for **Outfall #001A**, the permittee shall perform WHOLE EFFLUENT TOXICITY (WET), ANALYTICAL CHEMISTRY, and PRIORITY POLLUTANT TESTING as follows:

WHOLE EFFLUENT TOXICITY (WET) [7]	Daily Maximum	Minimum Frequency	Sample Type
Acute No Observed Effect Level (A-NOEL) Invertebrate-**Mysid Shrimp** (*Mysidopsis bahia*) *[TDA3E]*	Report % *[23]*	Once Every Other Year *[01/2Y]*	24-Hour Composite *[24]*
Chronic No Observed Effect Level (C-NOEL) Invertebrate-**Sea Urchin** (*Arbacia punctulata*) *[TBH3A]*	Report % *[23]*	Once Every Other Year *[01/2Y]*	24-Hour Composite *[24]*
ANALYTICAL CHEMISTRY[8] *[XXXXX]*	Report mg/L/µg/L *[19/28]*	2/Year *[02/YR]*	24-Hour Composite/Grab *[24/GR]*
PRIORITY POLLUTANT [9] *[50008]*	Report µg/L *[28]*	1/Quarter[9] *[01/90]*	24-Hour Composite/Grab *[24/GR]*

The italicized numeric values bracketed in the table and in subsequent text are code numbers that Department personnel utilize to code the monthly Discharge Monitoring Reports.

FOOTNOTES: See Pages 9 through 12 of this permit for applicable footnotes.

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

3. SCREENING LEVEL TESTING. During the period **beginning 12 months prior to permit expiration and lasting through permit expiration** for **Outfall #001A**, the permittee shall perform WHOLE EFFLUENT TOXICITY (WET), **PRIORITY POLLUTANT,** AND ANALYTICAL CHEMISTRY TESTING as follows:

WHOLE EFFLUENT TOXICITY (WET) [7]	Daily Maximum	Minimum Frequency	Sample Type
Acute No Observed Effect Level (A-NOEL) Invertebrate-**Mysid Shrimp** (*Mysidopsis bahia*) *[TDA3E]*	Report % *[23]*	2/Year *[02/YR]*	24-Hour Composite *[24]*
Chronic No Observed Effect Level (C-NOEL) Invertebrate-**Sea Urchin** (*Arbacia punctulata*) *[TBH3A]*	Report % *[23]*	2/Year *[02/YR]*	24-Hour Composite *[24]*
PRIORITY POLLUTANT [9] *[50008]*	Report µg/L *[28]*	1/Year *[01/YR]*	24-Hour Composite/Grab *[24/GR]*
ANALYTICAL CHEMISTRY[8] *[XXXXX]*	Report mg/L/µg/L *[19/28]*	4/Year *[04/YR]*	24-Hour Composite/Grab *[24/GR]*

The italicized numeric values bracketed in the table and in subsequent text are code numbers that Department personnel utilize to code the monthly Discharge Monitoring Reports.

FOOTNOTES: See Pages 9 through 12 of this permit for applicable footnotes.

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

FOOTNOTES:

1. **Authorized Discharge Points** – The primary discharge pipe, an 18-inch diameter pipe referred to as Outfall #001A, is normally utilized to convey treated municipal wastewater from the Main Plant to Frenchman Bay in Bar Harbor. During periods of high plant flows (> 3.0 MGD), most common in the spring and fall, discharges from Outfall #001A are hydraulically limited. As a result, the wastewater treatment facility experiences hydraulic limitations and best practicable treatment of the wastewater is jeopardized. This permit authorizes the facility to discharge from Outfall #001B, a 24-inch diameter pipe that branches off of, and is located approximately 380 feet north of, Outfall #001A. Outfall #001B extends out into the receiving water approximately 1,340 feet to a depth of approximately 28 feet below the surface at mean low water. The discharges from Outfall #001B shall receive the same degree of treatment as discharges from Outfall #001A.

2. **Monitoring – All influent monitoring shall be conducted at facility headworks following grit removal and influent screening. All effluent monitoring shall be conducted at a location following the last treatment unit in the treatment process as to be representative of end-of-pipe effluent characteristics. Effluent monitoring shall be performed at the effluent end of the chlorine contact chamber following the dechlorination point.** Any change in sampling location must be approved by the Department in writing. Sampling and analysis must be conducted in accordance with: a) methods approved by 40 Code of Federal Regulations (CFR) Part 136; b) alternative methods approved by the Department in accordance with the procedures in 40 CFR Part 136; or c) as otherwise specified by the Department. Samples that are sent out for analysis shall be analyzed by a laboratory certified by the State of Maine's Department of Human Services.

3. **Percent Removal** – The treatment facility shall maintain a minimum of 85 percent removal of both biochemical oxygen demand and total suspended solids for all flows receiving secondary treatment. The percent removal shall be calculated based on influent and effluent concentration values. The percent removal shall be waived when the monthly average influent concentration is less than 200 mg/L.

4. **Bacteria Limits** – Fecal coliform bacteria limits and monitoring requirements are seasonal and apply between May 15 and September 30 of each year.

5. **Bacteria Reporting** – The monthly average fecal coliform bacteria limitation is a geometric mean limitation and sample results shall be reported as such.

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

FOOTNOTES:

6. **TRC Monitoring** – Monitoring for TRC is only required when elemental chlorine or chlorine-based compounds are in use for effluent disinfection. TRC shall be tested using Amperometric Titration or the DPD Spectrophotometric Method. The USEPA approved methods are found in Standard Methods for the Examination of Water and Waste Water, (Most current edition), Method 4500-CL-E and Method 4500-CL-G or USEPA Manual of Methods of Analysis of Water and Wastes. For the purposes of Discharge Monitoring Report (DMR) reporting when a facility has not disinfected with chlorine-based compounds for an entire reporting period, enter **"NODI-9" indicating " monitoring not required this monitoring period."**

7. **Whole Effluent Toxicity (WET) Testing** – Definitive WET testing is a multi-concentration testing event (a minimum of five dilutions bracketing the critical acute and chronic thresholds of 5.7% and 3.0%, respectively), which provides a point estimate of toxicity in terms of No Observed Effect Level, commonly referred to as NOEL or NOEC. A-NOEL is defined as the acute no observed effect level with survival as the end point. C-NOEL is defined as the chronic no observed effect level with survival, reproduction and growth as the end points.

   Beginning upon issuance of this permit and lasting through 12 months prior to permit expiration, the permittee shall conduct **surveillance level WET testing** at a minimum frequency of once every other year **(reduced testing)**. Each surveillance test shall be conducted in a different calendar quarter than the previous test. Acute tests shall be conducted on the mysid shrimp (*Mysidopsis bahia*); chronic tests shall be conducted on the sea urchin (*Arbacia punctulata).* Results shall be submitted within 30 days of receiving the results from the laboratory conducting the testing.

   Beginning 12 months prior to permit expiration and lasting through permit expiration, the permittee shall conduct **screening level WET testing** at a minimum frequency of twice per year (2/Year). For screening level tests, one test shall be conducted in the calendar period between January and June and the other test conducted six months later. Acute tests shall be conducted on the mysid shrimp; chronic tests shall be conducted on the sea urchin. Results shall be submitted within 30 days of receiving the results from the laboratory conducting the testing.

   Results of WET tests shall be reported on the "WET Results Report – Marine Waters" form included as Attachment A of this permit each time a WET test is performed. The permittee is required to analyze the effluent for the parameters specified on the "WET and Analytical Chemistry Results – Marine Waters" form included as Attachment B of this permit each time a WET test is performed. It is noted that receiving water chemistry need only be performed at the discretion of the permittee and must be performed using an aliquot of the WET chemistry sample.

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

FOOTNOTES:

Toxicity tests must be conducted by an experienced laboratory approved by the Department. The laboratory must follow procedures as described in the following USEPA methods manuals.

a. U.S. Environmental Protection Agency. 2002. *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, 5th ed. EPA 821-R-02-012. U.S. Environmental Protection Agency, Office of Water, Washington, D.C., October 2002 (the acute method manual).

b. U.S. Environmental Protection Agency. 2002. *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms*, 3rd ed. EPA 821-R-02-014. U.S. Environmental Protection Agency, Office of Water, Washington, D.C., October 2002 (the marine chronic method manual).

8. **Analytical Chemistry** – Pursuant to Department rule 06-096 CMR Chapter 530 Section 2.C.4, analytical chemistry refers to a suite of chemical tests that include ammonia nitrogen (as N), total aluminum, total arsenic, total cadmium, total chromium, total copper, total cyanide, total lead, total nickel, total silver, total zinc and total residual chlorine.

Beginning upon issuance of this permit and lasting through 12 months prior to permit expiration (surveillance level), the permittee shall conduct analytical chemistry monitoring at a minimum frequency of twice per year (2/Year). Tests shall be conducted in a different calendar quarter for each testing event, such that at least one test is conducted in all four calendar quarters after two years of testing.

Beginning 12 months prior to the expiration of this permit and lasting through permit expiration (screening level), the permittee shall conduct analytical chemistry monitoring at a minimum frequency of once per calendar quarter (1/Quarter).

Analytical chemistry testing shall be conducted using methods that permit detection of a pollutant at existing levels in the effluent or that achieve minimum reporting levels of detection as specified by the Department. Results shall be submitted to the Department within thirty (30) days of the permittee receiving the data report from the laboratory conducting the testing. For the purposes of Discharge Monitoring Report (DMR) reporting when analytical chemistry monitoring is not required during the reporting period, enter **"NODI-9" indicating " monitoring not required this monitoring period."**

The permittee is required to analyze the effluent for the "analytes required for analytical chemistry" as provided on the "WET and Analytical Chemistry Results – Marine Waters" form included as Attachment B of this permit each time analytical chemistry monitoring is performed.

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

FOOTNOTES:

9. **Priority Pollutant Testing** – Priority pollutant testing refers to analysis for levels of priority pollutants listed in Department rule 06-096 CMR Chapter 525 Section 4.VI.

   Beginning upon issuance of this permit and lasting through three calendar quarters following issuance of this permit, the permittee shall conduct priority pollutant testing at a minimum frequency of once per calendar quarter (1/Quarter) (total of three tests) to fulfill testing requirements established by the previous permitting action.

   Surveillance level priority pollutant testing is not required pursuant to Department rule 06-096 CMR Chapter 530 Section 2.D.

   Beginning 12 months prior to permit expiration and lasting through permit expiration, the permittee shall conduct **screening level priority pollutant testing** at a minimum frequency of once per year (1/Year).

   Priority pollutant testing shall be conducted on samples collected at the same time as those collected for whole effluent toxicity tests, when applicable. Priority pollutant testing shall be conducted using methods that permit detection of a pollutant at existing levels in the effluent or that achieve minimum reporting levels of detection as specified by the Department. Results shall be submitted to the Department within thirty (30) days of the permittee receiving the data report from the laboratory conducting the testing. **For the purposes of Discharge Monitoring Report (DMR) reporting when priority pollutant monitoring is not required during the reporting period, enter "NODI-9" indicating " monitoring not required this monitoring period."**

   All mercury sampling shall be conducted in accordance with USEPA's "clean sampling techniques" found in USEPA Method 1669, Sampling Ambient Water For Trace Metals At EPA Water Quality Criteria Levels. All mercury analysis shall be conducted in accordance with USEPA Method 1631, Determination of Mercury in Water by Oxidation, Purge and Trap, and Cold Vapor Fluorescence Spectrometry.

SPECIAL CONDITIONS

B. NARRATIVE EFFLUENT LIMITATIONS

1. The effluent shall not contain a visible oil sheen, foam or floating solids at any time which would impair the usages designated by the classification of the receiving waters.

2. The effluent shall not contain materials in concentrations or combinations which are hazardous or toxic to aquatic life, or which would impair the usages designated by the classification of the receiving waters.

3. The discharge shall not impart color, taste, turbidity, toxicity, radioactivity or other properties which cause those waters to be unsafe for the designated uses and characteristics ascribed to their classification.

4. Notwithstanding specific conditions of this permit, the effluent must not lower the quality of any classified body of water below such classification, or lower the existing quality of any body of water if the existing quality is higher than the classification.

C. DISINFECTION

If chlorination is used as the means of disinfection, an approved chlorine contact tank providing the proper detention time consistent with good engineering practice must be utilized followed by a dechlorination system if the imposed total residual chlorine (TRC) limit cannot be achieved by dissipation in the detention tank. The total residual chlorine in the effluent shall at no time cause any demonstrable harm to aquatic life in the receiving waters. The dose of chlorine applied shall provide a TRC concentration that will effectively reduce fecal coliform bacteria levels to or below those specified in Special Condition A, *Effluent Limitation and Monitoring Requirements,* above.

D. TREATMENT PLANT OPERATOR

The treatment facility must be operated by a person holding a minimum of a **Grade IV** certificate (or Registered Maine Professional Engineer) pursuant to Title 32 M.R.S.A. §4171 *et seq.* All proposed contracts for facility operation by any person must be approved by the Department before the permittee may engage the services of the contract operator.

E. LIMITATIONS FOR INDUSTRIAL USERS

Pollutants introduced into the waste water collection and treatment system by a non-domestic source (user) shall not pass through or interfere with the operation of the treatment system.

SPECIAL CONDITIONS

F. MONITORING AND REPORTING

Monitoring results obtained during the previous month shall be summarized for each month and reported on separate Discharge Monitoring Report (DMR) forms provided by the Department and **postmarked on or before the thirteenth (13th) day of the month or hand-delivered to the Department's Regional Office such that the DMR's are received by the Department on or before the fifteenth (15th) day of the month** following the completed reporting period. A signed copy of the DMR and all other reports required herein shall be submitted to the following address:

Department of Environmental Protection
Eastern Maine Regional Office
Bureau of Land and Water Quality
Division of Engineering, Compliance and Technical Assistance
106 Hogan Road
Bangor, Maine 04401

G. NOTIFICATION REQUIREMENT

In accordance with Standard Condition D, the permittee shall notify the Department of the following.

1. Any introduction of pollutants into the wastewater collection and treatment system from an indirect discharger in a primary industrial category discharging process wastewater; and

2. Any substantial change in the volume or character of pollutants being introduced into the wastewater collection and treatment system by a source introducing pollutants into the system at the time of permit issuance. For the purposes of this section, notice regarding substantial change shall include information on:

   (a) the quality and quantity of wastewater introduced to the wastewater collection and treatment system; and

   (b) any anticipated impact caused by the change in the quantity or quality of the wastewater to be discharged from the treatment system.

H. UNAUTHORIZED DISCHARGES

The permittee is authorized to discharge only in accordance with the terms and conditions of this permit and only from Outfall #001A (secondary treated wastewater) and the three (3) combined sewer overflow outfalls (Outfall #004, #006 and #007) listed in Special Condition L, *Combined Sewer Overflows*, of this permit. Discharges of wastewater from any other point source are not authorized under this permit, and shall be reported in accordance with Standard Condition B(5), Bypasses, of this permit.

SPECIAL CONDITIONS

I. WET WEATHER FLOW MANAGEMENT PLAN

The treatment facility staff shall develop and maintain a Wet Weather Management Plan to direct the staff on how to operate the facility effectively during periods of high flow. The Department acknowledges that the existing collection system may deliver flows in excess of the monthly average design capacity of the treatment plant during periods of high infiltration and rainfall. The revised plan shall include operating procedures for a range of intensities, address solids handling procedures (including septic waste and other high strength wastes if applicable) and provide written operating and maintenance procedures during the events.

Once the Wet Weather Management Plan has been approved, the permittee shall review their plan annually and record any necessary changes to keep the plan up to date.

J. OPERATION & MAINTENANCE (O&M) PLAN

The permittee shall maintain a current written comprehensive Operation & Maintenance (O&M) Plan at the facility. The plan shall provide a systematic approach by which the permittee shall at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit.

By December 31 of each year, or within 90 days of any process changes or minor equipment upgrades, the permittee shall evaluate and modify the O&M Plan including site plan(s) and schematic(s) for the wastewater treatment facility to ensure that it is up-to-date. The O&M Plan shall be kept on-site at all times and made available to Department and USEPA personnel upon request.

Within 90 days of completion of new and or substantial upgrades of the wastewater treatment facility, **the permittee shall submit the updated O&M Plan to their Department inspector for review and comment.**

K. DISPOSAL OF SEPTAGE WASTE IN WASTEWATER TREATMENT FACILITY

During the effective period of this permit, the permittee is authorized to receive and introduce into the treatment process or solids handling or treatment plant process up to **a maximum of 4,000 gallons per day** of septage, subject to the following terms and conditions:

1. This approval is limited to methods and plans described in the application and supporting documents. Any variations are subject to review and approval prior to implementation.

2. At no time shall the addition of septage cause or contribute to effluent quality violations. If such conditions do exist, the introduction of septage into the treatment process or solids handling stream shall be suspended until effluent quality can be maintained.

3. The permittee shall maintain records which shall include, as a minimum, the following by date: volume of septage received, source of the septage (name of municipality), the hauler transporting the septage, the dates and volume of septage added to the waste water treatment influent and test results.

SPECIAL CONDITIONS

K. DISPOSAL OF SEPTAGE WASTE IN WASTEWATER TREATMENT FACILITY (cont'd)

4. The addition of septage into the treatment process or solids handling stream shall not cause the treatment facilities design capacity to be exceeded. If, for any reason, the treatment process or solids handling facilities become overloaded, introduction of septage into the treatment process or solids handling stream shall be reduced or terminated in order to eliminate the overload condition.

5. Septage known to be harmful to the treatment processes shall not be accepted. Wastes that contain heavy metals, toxic chemicals, extreme pH, flammable or corrosive materials in concentrations harmful to the treatment operation shall be refused.

6. Holding tank waste water shall not be recorded as septage but should be reported in the treatment facility's influent flow.

7. During wet weather flows, no septage shall be added to the treatment process or solids handling facilities.

L. COMBINED SEWER OVERFLOWS (CSOs)

Pursuant to Chapter 570 of Department rules, *Combined Sewer Overflow Abatement,* the permittee is authorized to discharge from the following locations of combined sewer overflows (CSOs) (storm water and sanitary wastewater) subject to the conditions and requirements herein.

1. CSO locations

Outfall #	Location	Receiving Water & Class
004	Main Street Pump Station, Corner of Cromwell Harbor Road and Main St.	Frenchman Bay, Class SB
006	Rodrick Street Pump Station Rodrick Street	Frenchman Bay, Class SB
007	West Street Pump Station West Street	Eddie Brook, Class B

2. Prohibited Discharges

   a) The discharge of dry weather flows is prohibited. All such discharges shall be reported to the Department in accordance with Standard Condition D (1) of this permit.

   b) No discharge shall occur as a result of mechanical failure, improper design or inadequate operation or maintenance.

   c) No discharges shall occur at flow rates below the applicable design capacities of the wastewater treatment facility, pumping stations or sewerage system.

SPECIAL CONDITIONS

L. COMBINED SEWER OVERFLOWS (CSOs)

3. Narrative Effluent Limitations

   a) The effluent shall not contain a visible oil sheen, settled substances, foam, or floating solids at any time that impair the characteristics and designated uses ascribed to the classification of the receiving waters.

   b) The effluent shall not contain materials in concentrations or combinations that are hazardous or toxic to aquatic life; or which would impair the usage designated by the classification of the receiving waters.

   c) The discharge shall not impart color, turbidity, toxicity, radioactivity or other properties that cause the receiving waters to be unsuitable for the designated uses and other characteristics ascribed to their class.

   d) Notwithstanding specific conditions of this permit, the effluent by itself or in combination with other discharges shall not lower the quality of any classified body of water below such classification, or lower the existing quality of any body of water if the existing quality is higher than the classification.

4. CSO Master Plan (see Sections 2 & 3 of Chapter 570 Department rules)

   The permittee shall implement CSO control projects in accordance with an approved CSO Master Plan and abatement schedule.

   On or before December 31, 2006, ***[PCS Code 81699]*** the permittee shall submit a CSO Master Plan and abatement schedule to the Department for review and approval.

   To modify the dates and or projects specified above, the permittee must file an application with the Department to formally modify this permit. The remaining work items identified in the abatement schedule may be amended from time to time based on mutual agreements between the permittee and the Department. The permittee must notify the Department in writing prior to any proposed changes to the implementation schedule.

5. Nine Minimum Controls (NMC) (see Department rule Chapter 570 Section 5)

   The permittee shall implement and follow the Nine Minimum Control documentation as approved by EPA on January 19, 2000. Work preformed on the Nine Minimum Controls during the year shall be included in the annual CSO Progress Report (see below).

SPECIAL CONDITIONS

L. COMBINED SEWER OVERFLOWS (CSOs)

6. CSO Compliance Monitoring Program (see Department rule Chapter 570 Section 6)

   The permittee shall conduct flow monitoring according to an approved *Compliance Monitoring Program* on all CSO points, as part of the CSO Master Plan. Annual flow volumes for all CSO locations shall be determined by actual flow monitoring, by estimation using a model such as EPA's Storm Water Management Model (SWMM) or by some other estimation technique approved by the Department.

   Results shall be submitted annually as part of the annual *CSO Progress Report* (see below), and shall include annual precipitation, CSO volumes (actual or estimated) and any block test data required. Any abnormalities during CSO monitoring shall also be reported. The results shall be reported on the Department form *"CSO Activity and Volumes"* (Attachment C of this permit) or similar format and submitted to the Department on diskette.

   CSO control projects that have been completed shall be monitored for volume and frequency of overflow to determine the effectiveness of the project toward CSO abatement. This requirement shall not apply to those areas where complete separation has been completed and CSO outfalls have been eliminated.

7. Additions of New Wastewater (see Department rule Chapter 570 Section 8)

   Chapter 570 Section 8 lists requirements relating to any proposed addition of wastewater to the combined sewer system. Documentation of the new wastewater additions to the system and associated mitigating measures shall be included in the annual *CSO Progress Report* (see below). Reports must contain the volumes and characteristics of the wastewater added or authorized for addition and descriptions of the sewer system improvements and estimated effectiveness. Any sewer extensions upstream of a CSO must be reviewed and approved by the Department prior to their connection to the collection system. A Sewer Extension/Addition Reporting Form shall be completed and submitted to the Department along with plans and specifications of the proposed extension/addition.

8. Annual CSO Progress Reports (see Department rule Chapter 570 Section 7)

   By March 1 of each year *[PCS Code 11099]*, the permittee shall submit a *CSO Progress Reports* covering the previous calendar year (January 1 to December 31). The CSO Progress Report shall include, but is not necessarily limited to, the following topics as further described in Chapter 570: CSO abatement projects, schedule comparison, progress on inflow sources, costs, flow monitoring results, CSO activity and volumes, nine minimum controls update, sewer extensions, and new commercial or industrial flows.

SPECIAL CONDITIONS

L. COMBINED SEWER OVERFLOWS (CSOs)

The CSO Progress Reports shall be completed on a standard form entitled *"Annual CSO Progress Report."* furnished by the Department, and submitted in electronic form, if possible, to the following address:

CSO Coordinator
Department of Environmental Protection
Bureau of Land and Water Quality
Division of Engineering, Compliance and Technical Assistance
17 State House Station
Augusta, Maine 04333 e-mail: CSOCoordinator@maine.gov

9. Signs

If not already installed, the permittee shall install and maintain an identification sign at each CSO location as notification to the public that intermittent discharges of untreated sanitary wastewater occur. The sign must be located at or near the outfall and be easily readable by the public. The sign shall be a minimum of 12" x 18" in size with white lettering against a green background and shall contain the following information:

TOWN OF BAR HARBOR
WET WEATHER
SEWAGE DISCHARGE
CSO# AND NAME

10. Definitions

For the purposes of this permitting action, the following terms are defined as follows:

a. Combined Sewer Overflow - a discharge of excess waste water from a municipal or quasi-municipal sewerage system that conveys both sanitary wastes and storm water in a single pipe system and that is in direct response to a storm event or snowmelt.

b. Dry Weather Flows - flow in a sewerage system that occurs as a result of non-storm events or are caused solely by ground water infiltration.

c. Wet Weather Flows - flow in a sewerage system that occurs as a direct result of a storm event, or snowmelt in combination with dry weather flows.

SPECIAL CONDITIONS

M. CHAPTER 530(2)(D)(4) STATEMENT FOR REDUCED TOXICS TESTING

On or before December 31st of each year of the effective term of this permit ***[PCS Code 95799]***, the permittee shall provide the Department with statements describing the following:

(a) Changes in the number or types of non-domestic wastes contributed directly or indirectly to the wastewater treatment works that may increase the toxicity of the discharge;

(b) Changes in the operation of the treatment works that may increase the toxicity of the discharge; and

(c) Changes in industrial manufacturing processes contributing wastewater to the treatment works that may increase the toxicity of the discharge.

N. REOPENING OF PERMIT FOR MODIFICATIONS

Upon evaluation of the tests results or monitoring requirements specified in Special Conditions of this permitting action, new site specific information, or any other pertinent test results or information obtained during the term of this permit, the Department may, at any time, and with notice to the permittee, modify this permit to: (1) include effluent limits necessary to control specific pollutants or whole effluent toxicity where there is a reasonable potential that the effluent may cause water quality criteria to be exceeded; (2) require additional effluent or ambient water quality monitoring if results on file are inconclusive; or (3) change monitoring requirements or limitations based on new information.

O. SEVERABILITY

In the event that any provision, or part thereof, of this permit is declared to be unlawful by a reviewing court, the remainder of the permit shall remain in full force and effect, and shall be construed and enforced in all respects as if such unlawful provision, or part thereof, had been omitted, unless otherwise ordered by the court.

ATTACHMENT A

WHOLE EFFLUENT TOXICITY (WET) REPORT
MARINE WATERS

Facility Name _____ DEP License # _____ NPDES or MEPDES Permit # _____

Contact person _____ Telephone # _____

Date initially sampled _____ (mm/dd/yy) Date tested _____ (mm/dd/yy) Chlorinated? _____

Test type screening _____ surveillance _____ Dechlorinated? _____

Results % effluent

	Mysid shrimp	Sea urchin
A-NOEL		
C-NOEL		

DEP/EPA Test required by: _____

Receiving Water Concentration

A-NOEL	
C-NOEL	

Data summary

	Mysid shrimp % survival	Sea urchin % survival
QC standard	>90	>80
lab control		
receiving water control		
conc. 1 (%)		
conc. 2 (%)		
conc. 3 (%)		
conc. 4 (%)		
conc. 5 (%)		
conc. 6 (%)		
stat test used		

place * next to values statistically different from controls

Salinity Adjustment

brine	
sea salt	
other	

Reference toxicant

	Mysid shrimp A-NOEL	Sea urchin C-NOEL
toxicant /date		
limits (mg/L)		
results (mg/L)		

Comments _____

Laboratory Conducting Tests. To the best of my knowledge this information is true, accurate, and complete

Signature _____ Company _____

Printed Name _____ Mailing Address _____

Telephone # _____ City, State, ZIP _____

Report WET chemistry on DEP Form "WET and Analytical Chemistry Results - Marine Waters, November 2005."

ATTACHMENT B

WET AND ANALYTICAL CHEMISTRY RESULTS
MARINE WATERS

Facility Name _____ DEP License # _____ NPDES or MEPDES Permit # _____

Date Collected _____ mm/dd/yy Date Analyzed _____ mm/dd/yy

Lab ID No. _____ Actual Daily Discharge Flow _____ MGD Monthly Average Discharge Flow _____ MGD

	Analyte	Report Units	Receiving Water Results*	Effluent Results	Detection level	Method
Analytes Required for Analytical Chemistry	Ammonia nitrogen	µg/L			µg/L	
	Total aluminum	µg/L			µg/L	
	Total arsenic	µg/L			µg/L	
	Total cadmium	µg/L			µg/L	
	Total chromium	µg/L			µg/L	
	Total copper	µg/L			µg/L	
	Total cyanide	µg/L			µg/L	
	Total lead	µg/L			µg/L	
	Total nickel	µg/L			µg/L	
	Total silver	µg/L			µg/L	
	Total zinc	µg/L			µg/L	
	Total residual chlorine	mg/L			mg/L	
	other ( )					
Additional Analytes Required For WET Chemistry	Total organic carbon	mg/L			mg/L	
	Total solids	mg/L			mg/L	
	Total suspended solids	mg/L			mg/L	
	Salinity	ppt			ppt	
	pH	S.U.			S.U.	
	other ( )					

*** Receiving water chemistry need only be performed at the discretion of the permittee.**

Comments

_____

_____

_____

Laboratory conducting test. To the best of my knowledge this information is true, accurate, and complete.

Signature _____ Company _____

Printed Name _____ Mailing Address _____

Tel. Number _____ City, State, ZIP _____

ATTACHMENT C

ATTACHMENT C
MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION
CSO ACTIVITY AND VOLUMES

MUNICIPALITY OR DISTRICT	MEPDES / NPDES PERMIT NO.
REPORTING YEAR	SIGNED BY:
YEARLY TOTAL PRECIPITATION INCHES	DATE:

CSO EVENT NO.	START DATE OF STORM	PRECIP. DATA		FLOW DATA (GALLONS PER DAY) OR BLOCK ACTIVITY("1")							
		TOTAL INCHES	MAX. HR. INCHES	LOCATION: NUMBER:	LOCATION: NUMBER:	LOCATION: NUMBER:	LOCATION: NUMBER:	LOCATION: NUMBER:	LOCATION: NUMBER:	EVENT OVERFLOW GALLONS	EVENT DURATION HRS
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											
	TOTALS										

Note 1: Flow data should be listed as gallons per day. Storms lasting more than one day should show total flow for each day.

Note 2: Block activity should be shown as a "1" if the block floated away.

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT
AND
MAINE WASTE DISCHARGE LICENSE

FACT SHEET

DATE: **NOVEMBER 21, 2005**

PERMIT NUMBER: **#ME0101214**
LICENSE NUMBER: **#W002591-5L-F-R**

NAME AND ADDRESS OF APPLICANT:

TOWN OF BAR HARBOR
WASTEWATER TREATMENT FACILITY
93 COTTAGE STREET
BAR HARBOR, MAINE 04609

COUNTY: **HANCOCK**

NAME AND ADDRESS WHERE DISCHARGE OCCURS:

TOWN OF BAR HARBOR
MAIN PLANT
BAR HARBOR, MAINE 04609

RECEIVING WATER/CLASSIFICATION: **FRENCHMAN BAY (ATLANTIC OCEAN)/CLASS SB**

COGNIZANT OFFICIAL AND TELEPHONE NUMBER: **MR. ROBERT KANE**
(207) 288-4028

1. APPLICATION SUMMARY

Application: The Town of Bar Harbor (Town) has applied to the Department of Environmental Protection (Department) for renewal of Waste Discharge License (WDL) #W002591-5L-D-R issued on December 14, 2000, and subsequent WDL Modification #W002591-5L-E-M / Maine Pollutant Discharge Elimination System (MEPDES) permit #ME0101214 issued on August 28, 2001. The 8/28/01 MEPDES permit is scheduled to expire on December 14, 2005, the expiration date associated with the 12/14/00 WDL. The 8/28/01 MEPDES permit authorized the monthly average discharge of up to 2.0 million gallons per day (MGD) of secondary treated sanitary wastewater from the Town's Main Plant, and an unspecified quantity of excess combined sanitary and storm water during wet weather events from four (4) combined sewer overflow (CSO) outfalls to the Atlantic Ocean at Frenchman Bay, Class SB, in Bar Harbor, Maine.

2. PERMIT SUMMARY

a. Terms and Conditions: **This permitting action is similar to the 8/28/01 WDL modification/permitting action in that it is:**

1. Carrying forward the monthly average discharge flow limit of 2.0 MGD and the daily maximum discharge flow reporting requirement;

2. Carrying forward authorization to discharge an unspecified quantity of excess combined sanitary and storm water during wet weather events from three (3) combined sewer overflow (CSO) outfalls identified as Outfalls #004, #006, and #007;

3. Carrying forward the monthly average, weekly average and daily maximum technology-based concentration and mass limits for biochemical oxygen demand (BOD_5) and total suspended solids (TSS);

4. Carrying forward the requirement for a minimum of 85% removal of BOD_5 and TSS;

5. Carrying forward the daily maximum technology-based concentration limit for settleable solids;

6. Carrying forward the seasonal monthly average and daily maximum concentration limits for fecal coliform bacteria;

7. Carrying forward the technology-based monthly average concentration limit for total residual chlorine (TRC);

8. Carrying forward the pH range limit of 6.0 to 9.0 standard units (SU);

9. Carrying forward authorization to accept and introduce into the treatment works a daily maximum of up to 4,000 gallons per day of septage wastes from local haulers; and

10. Carrying forward the minimum monitoring frequency requirements for all monitored parameters.

PERMIT SUMMARY (cont'd)

This permitting action is different from the 8/28/01 permitting action in that it is

1. Revising surveillance and screening level whole effluent toxicity (WET) and priority pollutant testing requirements and test organisms based on revised "toxics" rule, Chapter 530;

2. Eliminating the chronic limit of 3% for the sea urchin based on results of facility testing;

3. Establishing reduced surveillance level WET testing based on the results of facility testing, and establishing Special Condition N, *Chapter 530(2)(D)(4) Statement for Reduced Toxics Testing*;

4. Establishing analytical chemistry testing pursuant to revised "toxics" rule Chapter 530;

5. Revising the daily maximum, water quality-based concentration limit for TRC based on a revised acute dilution factor;

6. Revising the daily maximum water quality-based concentration and mass limits for total copper based on current acute ambient water quality criterion for copper;

7. Revising the monthly average concentration and mass limits for total arsenic based on current human health-based ambient water quality criterion for arsenic;

8. Establishing a requirement to perform three priority pollutant tests at a frequency of once per calendar quarter for the first three quarters of the effective date of this permit to fulfill the testing requirements established by the previous permitting action; and

9. Removing the Albert Meadow pump station (Combined Sewer Overflow point 005) from the CSO Program.

b. History: The most recent significant permitting/licensing actions completed for the Town's Main Plant include the following:

June 12, 1990 – The Department issued WDL #W002591-46-C-R to the Town for separate discharges from three wastewater treatment facilities (Main Plant, Hulls Cove Plant and DeGregorie Park Plant). As a matter of convenience and expedience, the Department combined the licensing of the three facilities into the one document. The 6/12/90 WDL superseded the previous WDL issued to the Town on February 10, 1984 for the discharge from the Main Plant facility and a subsequent WDL amendment (to revise bacteria limits from year-round to seasonal) #W002591-46-A-A issued on April 23, 1987.

July 18, 1990 – The Natural Resources Council of Maine (NRCM) filed an appeal with the Board of Environmental Protection (Board) of the 6/12/90 WDL.

2. PERMIT SUMMARY (cont'd)

February 10, 1993 – The Department issued revised WDL #W002591-46-C-Z to the Town based on a settlement of the appeal filed by NRCM on 7/18/90. The license was modified to contain requirements for the Town to conduct toxicity testing of wastewater discharges, work to eliminate combined sewer overflows (CSOs) at the Main and Hulls Cove facilities, and to eliminate the discharge of chlorine in toxic amounts via construction/reconfiguration of outfall structures that provide adequate dilution for the flows discharged.

May 18, 1993 – The USEPA issued NPDES permit #ME0101214 to the Town for the discharges from the Main Plant, Hulls Cove Plant and DeGregorie Park facilities. The 5/18/93 permit superseded previous NPDES permits issued to the Town for the three facilities. See Page 1 of 11 of the 5/18/93 permit for a complete listing of NPDES permit numbers and their associated effective dates.

November 3, 1997 – The Department issued a letter to the Town, thereby administratively modifying the 2/10/93 WDL, to establish a monthly average concentration limit of 15 colonies/100 ml and to revise the daily maximum concentration limit from 15 colonies/100 ml to 50 colonies/100 ml for fecal coliform bacteria.

December 10, 1997 – The Town of Bar Harbor substantially completed the upgrade of the Main Plant. This upgrade increased the capacity of the treatment facility from a monthly average flow of 1.2 MGD to 2.0 MGD.

July 10, 2000 – Pursuant to Maine law, 38 M.R.S.A. §420 and §413 and Department rule, 06-096 CMR Chapter 519, *Interim Effluent Limitations and Controls for the Discharge of Mercury*, the Department issued a *Notice of Interim Limits for the Discharge of Mercury* to the permittee thereby administratively modifying WDL # W002591-46-C-Z by establishing interim monthly average and daily maximum effluent concentration limits of 9.9 parts per trillion (ppt) and 14.8 ppt, respectively, and a minimum monitoring frequency requirement of 4 tests per year for mercury. It is noted the limitations have not been incorporated into Special Condition A, *Effluent Limitations And Monitoring Requirements*, of this permit as limitations and monitoring frequencies are regulated separately through Maine law, 38 M.R.S.A. §413 and Department rule Chapter 519. However, the interim limitations remain in effect and enforceable and any modifications to the limits and or monitoring requirements will be formalized outside of this permitting document.

December 14, 2000 – The Department issued WDL #W002591-5L-D-R to the Town for the discharge from the Main Plant. It is noted the Town's Hulls Cove and DeGregoire Park wastewater treatment facilities were licensed independently.

January 12, 2001 – The Department received authorization from the USEPA to administer the NPDES program in Maine.

2. PERMIT SUMMARY (cont'd)

June 18, 2001 – The Town submitted an application to the Department to modify the 12/14/00 WDL for the Main Plant facility to incorporate the terms and conditions of the MEPDES program.

August 28, 2001 – The Department issued WDL #W002591-5L-E-M / MEPDES permit #ME0101214 to the Town for the monthly average discharge of up to 2.0 MGD from the Main Plant to Frenchman Bay of the Atlantic Ocean. The 8/28/01 WDL Modification/MEPDES permit superseded the 12/14/00 WDL.

August 26, 2005 – The Town submitted a General Application to the Department for renewal of the 8/25/01 MEPDES permit. The application was accepted for processing on August 29, 2005 and was assigned WDL # W002591-5L-F-R / MEPDES #ME0102214.

c. Source Description: The Town's three wastewater treatment facilities receive wastewater generated by residential and commercial users (approximately 1,450 customer accounts on approximately 1,380 lots) located within the Town of Bar Harbor. The Town does not have specific information as to the exact number of customers connected to each of the three treatment systems. The Main Plant facility receives wastewater generated by residential and commercial customers. There are no significant industrial users contributing flows to the facility. The Main Plant collection system is approximately 17.9 miles in length with seven (7) pump stations (Main Street, West Street, Albert Meadow, Canadian National, Rodick Street, Hancock Street, and Harbor One Place). Four of the seven pump stations (Main Street, West Street, Albert Meadow, and Canadian National) are equipped with permanent emergency back-up power sources, while the remaining three are manually pumped down in the event of high water. There are three (3) combined sewer overflow (CSO) points remaining in the collection system. The Town reported in their 2000 CSO annual report to the Department that the Albert Meadow CSO (#005) had been eliminated, but still contained an emergency bypass pipe. The Town has since informed the Department that the bypass structure has been permanently sealed such that the pump station is no longer a potential point source discharge.

The previous permitting action authorized the Town to receive and introduce into the treatment process or sludge handling stream up to 4,000 gallons per day (GPD) of septage from local septage haulers. Pursuant to Chapter 555, *Standards for the Addition of Septage to Waste Water Treatment Facilities,* and based on a written Septage Management Plan dated, 1996 and submitted as part of the Town's application for permit renewal, this permitting action is carrying forward authorization to accept up to 4,000 GPD of septage wastes from local haulers. The septage receiving facility is located adjacent to the aeration basins. The Main Plant facility periodically receives and treats, via sludge digestion and dewatering, septic and aerated sludge wastes from the Towns of Southwest Harbor and Mount Desert wastewater treatment facilities.

A map showing the location of the facility is included as Fact Sheet Attachment A.

2. PERMIT SUMMARY (cont'd)

d. Wastewater Treatment: The Main Plant facility provides a secondary level of wastewater treatment via a conventional activated sludge treatment process. All wastewater generated within the collection system is conveyed to the Main Street pump station and from there to the facility headworks. The headworks contains an automated grit removal system and a traveling bar screen. Screened wastewater flows to a flow splitter box and is equally distributed to six (6) approximately 17-foot wide by 40-foot long by 19-foot deep aeration basins fitted with fine bubble aeration. Three of the basins are taken off-line during winter months due to significant decrease in raw wastewater flows. Wastewater is then equally distributed to two (2) 50-foot diameter covered secondary clarifiers. Clarifier supernatant is conveyed to two (2) 150-foot long by 9-foot wide by 3-foot deep chlorine contact chambers for seasonal disinfection using sodium hypochlorite and dechlorination using sodium bisulfite.

Final effluent is conveyed for discharge to Frenchman Bay (Atlantic Ocean) via two separate discharge lines. The primary discharge pipe, Outfall #001A, is located in Compass Harbor and is an 18-inch diameter polyethylene pipe located 150 feet off shore. This outfall is equipped with a diffuser and is submerged to a depth of approximately 10 feet below the surface at mean low tide. During periods of high plant flows (> 3.0 MGD), most common in the spring and fall, discharges from Outfall #001A are hydraulically limited. As a result, the wastewater treatment facility experiences hydraulic limitations and best practicable treatment of the wastewater is jeopardized. Special Condition A of this permit authorizes the facility to discharge from Outfall #001B, a 24-inch diameter pipe that branches off Outfall #001A and is located in Cromwell Cove approximately 380 feet north of Outfall #001A. This outfall pipe is located approximately 1,340 feet off shore to a depth of approximately 28 feet below the surface at mean low water.

Sludge handling equipment at the Main Plant includes a 17-foot wide by 40-foot long by 19-foot deep sludge aerated digester basin and a 2-meter belt filter press for dewatering purposes. The Town hauls dewatered sludge to a licensed composting facility in Plymouth, Maine for final disposal. Typically, all sludge and septic wastes received at the Main Plant are conveyed directly to the sludge digester for treatment prior to dewatering. However, if the sludge pump experiences mechanical problems, the sludge/septic waste can be pumped to the aeration basins.

The Main Plant contains a biofilter designed to minimize odors associated with certain treatment structures. The Main Street pump station also contains a biofilter to reduce the presence of odors in the neighborhood surrounding the station.

A process flow schematic of the Main Plant is included as Fact Sheet Attachment B.

3. CONDITIONS OF PERMITS

Maine law, 38 M.R.S.A. Section 414-A, requires that the effluent limitations prescribed for discharges, including, but not limited to, effluent toxicity, require application of best practicable treatment (BPT), be consistent with the U.S. Clean Water Act, and ensure that the receiving waters attain the State water quality standards as described in Maine's Surface Water Classification System. In addition, 38 M.R.S.A., Section 420 and Department rule 06-096 CMR Chapter 530, *Surface Water Toxics Control Program,* require the regulation of toxic substances not to exceed levels set forth in Department rule 06-096 CMR Chapter 584, *Surface Water Quality Criteria for Toxic Pollutants*, and that ensure safe levels for the discharge of toxic pollutants such that existing and designated uses of surface waters are maintained and protected.

4. RECEIVING WATER QUALITY STANDARDS

Maine law, 38 M.R.S.A. §469 classifies all estuarine and marine waters lying within the boundaries of the State and which are not otherwise classified, which includes the Atlantic Ocean at Frenchman Bay at the point of discharge, as Class SB waters. Maine law, 38 M.R.S.A. §465-B(2) describes the standards for Class SB waters.

5. RECEIVING WATER QUALITY CONDITIONS

The State of Maine 2004 Integrated Water Quality Monitoring and Assessment Report, prepared pursuant to Sections 303(d) and 305(b) of the Federal Water Pollution Control Act, lists Frenchman Bay at Bar Harbor (Waterbody # 714-21) as, *"Category 4-B-2: Estuarine and Marine Waters Impaired by Bacteria From Combined Sewer Overflows (TMDL Required Only if Control Plans are Insufficient)."* This permitting action requires the Town to develop and implement a CSO master plan for the elimination or abatement of all CSO points associated with the Main Plant collection system. As the Town's Main Plant and the sewer collection system are upgraded and maintained in according to the CSO Master Plan and Nine Minimum Controls, there should be reductions in the frequency and volume of CSO activities and, over time, improvement in the quality of the wastewater discharged to the receiving waters.

The Maine Department of Marine Resources (DMR) assesses information on shellfish growing areas to ensure that shellfish harvested are safe for consumption. The DMR has authority to close shellfish harvesting areas wherever there is a pollution source, a potential pollution threat, or poor water quality. The DMR traditionally closes shellfish harvesting areas if there are known sources of discharges with unacceptable bacteria levels (instream thresholds established in the National Shellfish Sanitation Program) or maintains shellfish harvesting closure areas due to lack of updated information regarding ambient water quality conditions. In addition, the DMR prohibits shellfish harvesting in the immediate vicinity of all wastewater treatment outfall pipes as a precautionary measure in the event of a failure in the treatment plant's disinfection system. Thus, shellfish harvesting area #C47 is closed to the harvesting of shellfish due to insufficient or limited ambient water quality data to determine that the area meets the standards in the National Shellfish Sanitation Program. The shellfish

5. RECEIVING WATER QUALITY CONDITIONS (cont'd)

closure area is identified on the map included as Fact Sheet Attachment A. The Department is making the determination that compliance with the fecal coliform bacteria and other secondary wastewater treatment limits established in this permitting action ensure that the discharge of secondary treated wastewater from the Town's Main Plant will not cause or contribute to the failure of the receiving waters to meet the standards of its designated classification.

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS

a. Flow: The previous permitting action established, and this permitting action is carrying forward, a monthly average discharge flow limit of 2.0 million gallons per day (MGD) based on the design capacity of the treatment facility, a daily maximum discharge flow reporting requirement and a "continuous recorder" minimum monitoring frequency requirement.

b. Dilution Factors: Department rule, 06-096 CMR Chapter 530 Section 4.A.2..a, *Surface Water Toxics Control Program*, states that, *"For discharges to the ocean, dilution must be calculated as near-field or initial dilution, or that dilution available as the effluent plume rises from the point of discharge to its trapping level, at mean low water level and slack tide for the acute exposure analysis, and at mean tide for the chronic exposure analysis using appropriate models determined by the Department such as MERGE, CORMIX or another predictive model."* Based on the configuration of Outfall #001A and #001B and a discharge flow limit of 2.0 MGD, dilution factors associated with the discharge are as follows:

Acute = 16.5:1 Chronic = 33.3:1 Harmonic mean[1] = 100:1

c. Biochemical Oxygen Demand (BOD_5) and Total Suspended Solids (TSS): The previous permitting action established, and this permitting action is carrying forward, technology-based monthly and weekly average biochemical oxygen demand (BOD5) and total suspended solids (TSS) concentration limits of 30 mg/L and 45 mg/L, respectively, based on secondary treatment requirements of the Clean Water Act of 1977 §301(b)(1)(B), as defined in 40 CFR 133.102 and Department rule, 06-096 CMR Chapter 525(3)(III). The previous permitting action established, and this permitting action is carrying forward, technology-based daily maximum BOD_5 and TSS concentration limits of 50 mg/L based on a Department best professional judgement of best practicable treatment. The previous permitting action established, and this permitting action is carrying forward, monthly average, weekly average and daily maximum mass limits based on calculations using the

[1] The harmonic mean dilution factor is approximated by multiplying the chronic dilution factor by three (3). This multiplying factor is based on guidelines for estimation of human health dilution presented in the U.S. EPA publication, *"Technical Support Document for Water Quality-Based Toxics Control"* (Office of Water; EPA/505/2-90-001, page 88), and represents an estimation of harmonic mean flow on which human health dilutions are based in a riverine 7Q10 flow situation.

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

monthly average flow limit of 2.0 MGD and the appropriate concentration limits as follows:

Monthly Average Mass Limit: (30 mg/L)(8.34 lbs./gallon)(2.0 MGD) = 500 lbs./day
Weekly Average Mass Limit: (45 mg/L)(8.34 lbs./day)(2.0 MGD) = 750 lbs./day
Daily Maximum Mass Limit: (50 mg/L)(8.34 lbs./day)(2.0 MGD) = 834 lbs./day

The previous permitting action established, and this permitting action is carrying forward a requirement to achieve a minimum 30-day average removal of 85 percent for BOD_5 and TSS pursuant to Department rule, 06-096 CMR Chapter 525(3)(III)(a&b)(3).

The previous permitting action established, and this permitting action is carrying forward, a minimum monitoring frequency requirement of three times per week (3/Week) for BOD_5 and TSS, which is based on Department guidance for POTWs permitted to discharge between 1.5 and 5.0 MGD, and a "24-hour composite" sample type.

d. Settleable Solids: The previous permitting action established, and this permitting action is carrying forward, a technology-based daily maximum concentration limit of 0.3 ml/L for settleable solids, which is considered a best practicable treatment limitation (BPT), and a minimum monitoring frequency requirement of once per day (1/Day), which is based on Department guidance for POTWs permitted to discharge between 1.5 and 5.0 MGD, and a "grab" sample type.

e. Fecal Coliform Bacteria: The previous permitting action established, and this permitting action is carrying forward, seasonal monthly average and daily maximum concentration limits of 15 colonies/100 ml and 50 colonies/100 ml, respectively, for fecal coliform bacteria, which are consistent with the National Shellfish Sanitation Program, a minimum monitoring frequency requirement of three times per week (3/Week), which is based on Department guidance for POTWs permitted to discharge between 1.5 and 5.0 MGD, and a "grab" sample type. Bacteria limits are seasonal and apply between May 15 and September 30 of each year, however, the Department reserves the right to require year-round disinfection to protect the health, safety and welfare of the public.

f. Total Residual Chlorine (TRC): The previous permitting action established technology-based monthly average and water quality-based daily maximum concentration limits of 0.1 mg/L and 0.23 mg/L, respectively, a minimum monitoring frequency requirement of once per day (1/Day), which is based on Department guidance for POTWs permitted to discharge between 1.5 and 5.0 MGD, and a "grab" sample type for TRC. Limitations on TRC are specified to ensure that ambient water quality standards are maintained and that BPT technology is being applied to the discharge. Department permitting actions impose the more stringent of either a water quality-based or BPT-based limit. With dilution

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

factors as determined above, end-of-pipe (EOP) water quality-based concentration thresholds for TRC may be calculated as follows:

Acute (A) Criterion	Chronic (C) Criterion	A & C Dilution Factors	Calculated Acute Threshold	Chronic Threshold
0.013 mg/L	0.0075 mg/L	16.5:1 (A) 33.3:1 (C)	0.21 mg/L	0.25 mg/L

The Department has established a daily maximum BPT limitation of 1.0 mg/L for facilities that disinfect their effluent with elemental chlorine or chlorine-based compounds. For facilities that need to dechlorinate the discharge in order to meet water quality based thresholds, the Department has established daily maximum and monthly average BPT limits of 0.3 mg/L and 0.1 mg/L, respectively. The Town dechlorinates the effluent prior to discharge in order to consistently achieve compliance with the water quality-based thresholds. The calculated acute water quality-based threshold of 0.21 mg/L is more stringent than the daily maximum technology-based standard of 0.3 mg/L and is therefore being established in this permitting action. The monthly average technology-based standard of 0.1 mg/L is more stringent than the calculated chronic water quality-based threshold of 0.25 mg/L and is therefore being carried forward in this permitting action. This permitting action is carrying forward the minimum monitoring frequency of once per day (1/Day), which is based on Department guidance for POTWs permitted to discharge between 1.5 and 5.0 MGD, and "grab" sample type for TRC.

g. pH: The previous permitting action established, and this permitting action is carrying forward, a technology-based pH limit of 6.0 – 9.0 standard units, which is based on Department rule, 06-096 CMR Chapter 525(3)(III), and a minimum monitoring frequency requirement of once per day (1/Day), which is based on Department guidance for POTWs permitted to discharge between 1.5 and 5.0 MGD.

h. Whole Effluent Toxicity (WET), Priority Pollutant, and Analytical Chemistry Testing: Maine law, 38 M.R.S.A., §414-A and §420, prohibit the discharge of effluents containing substances in amounts that would cause the surface waters of the State to contain toxic substances above levels set forth in Federal Water Quality Criteria as established by the USEPA. Department rule, 06-096 CMR Chapter 530, *Surface Water Toxics Control Program* (toxics rule) sets forth effluent monitoring requirements and procedures to establish safe levels for the discharge of toxic pollutants such that existing and designated uses of surface waters are maintained and protected and narrative and numeric water quality criteria are met. Department rule 06-096 CMR Chapter 584, Surface *Water Quality Criteria for Toxic Pollutants*, sets forth ambient water quality criteria (AWQC) for toxic pollutants and procedures necessary to control levels of toxic pollutants in surface waters.

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

WET monitoring is required to assess and protect against impacts upon water quality and designated uses caused by the aggregate effect of the discharge on specific aquatic organisms. Acute WET tests are performed on invertebrate species mysid shrimp (*Mysidopsis bahia*); chronic WET tests are performed on sea urchin (*Arbacia punctulata*). Chemical-specific monitoring is required to assess the levels of individual toxic pollutants in the discharge, comparing each pollutant to acute, chronic, and human health water quality criteria. Priority pollutant testing refers to the analysis for levels of priority pollutants listed in Department rule 06-096 CMR Chapter 525 Section 4.VI. Analytical chemistry refers to a suite of chemical tests for ammonia-nitrogen, total aluminum, total cadmium, total chromium, total copper, total hardness (fresh water only), total lead, total nickel, total silver, total zinc, total arsenic, total cyanide and total residual chlorine.

Chapter 530 Section 2.B. categorizes dischargers subject to the toxics rule into one of four levels (Levels I through IV). Level II dischargers are those *"having a chronic dilution factor of at least 20 but less than 100 to 1."* The chronic dilution factor associated with the discharge from the Town's Main Plant is 33.3 to 1. Therefore, the Main Plant is considered a Level II facility for purposes of toxics testing. Chapter 530 Section 2.D specifies WET, chemical-specific and analytical chemistry test schedules for Level II dischargers as follows:

Level II Dischargers	WET Testing	Chemical-Specific Testing	Analytical Chemistry
Surveillance Level (first 4 years)	1 per year	None Required	2 per year
Screening Level (last year)	2 per year	1 per year	4 per year

The previous permitting action established a daily maximum chronic no observed effect level (C-NOEL) limit of 3% and a minimum monitoring frequency requirement of twice per year (2/Year) for the sea urchin, which was based on a June 27, 2001 statistical evaluation of WET test results on file with the Department. The 6/27/01 statistical evaluation indicated that the test result from April 4, 1999 exceeded the chronic ambient water quality criteria (AWQC) for the sea urchin. The limit was derived by taking the mathematical inverse of the chronic dilution factor of 33.3:1. The 6/27/01 statistical evaluation indicated that the discharge did not exceed or have a reasonable potential (RP) to exceed the AWQC for the remaining two WET species tested (mysid shrimp and inland silverside) and therefore a surveillance level testing frequency of once per year (1/Year) was established for those species.

A review of the data on file with the Department for the Town indicates that, to date, they have fulfilled the WET testing requirements, but must still perform three (3) additional chemical-specific tests to fulfill the screening level testing requirements of the previous permitting action. See Attachment C of this Fact Sheet for a summary of the WET test results. A review of the data indicates that and Attachment D of this Fact Sheet for a summary of the chemical-specific test dates.

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

On November 1, 2005, the Department conducted a statistical evaluation on the aforementioned WET and chemical-specific tests results in accordance with the statistical approach outlined in the Section 3.3.2 and Table 3-2 of USEPA's *"Technical Support Document for Water Quality-Based Toxics Control"* (USEPA Publication 505/2-90-001, March, 1991, EPA, Office of Water, Washington, D.C.).

WET Evaluation

The statistical evaluation indicates the discharge from the Town's Main Plant does not exceed or have a reasonable potential to exceed the critical acute (5.7%) or chronic (3.0%) water quality thresholds for any of the WET species tested to date.

Department rule Chapter 530 Section 2.D.3.c states, *"dischargers in Level II may reduce surveillance testing to one WET or specific chemical series every other year provided that testing in the preceding 60 months does not indicate any reasonable potential for exceedence."* Therefore, the Town qualifies for reduced surveillance level WET testing at the Main Plant.

Department rule Chapter 530 Section 2.D.4. states, *"all dischargers having waived or reduced testing must file statements with the Department on or before December 31 of each year describing the following.*

(d) Changes in the number or types of non-domestic wastes contributed directly or indirectly to the wastewater treatment works that may increase the toxicity of the discharge;

(e) Changes in the operation of the treatment works that may increase the toxicity of the discharge; and

(f) Changes in industrial manufacturing processes contributing wastewater to the treatment works that may increase the toxicity of the discharge.

Therefore, this permitting action is: 1) eliminating the daily maximum limit of 3% for the sea urchin; 2) establishing reduced surveillance level WET testing at a minimum frequency of once every other year using the mysid shrimp (acute) and sea urchin (chronic); 3) establishing Special Condition N, *Chapter 530 Certification*, pursuant to Chapter 530 Section 2.D.4.; and 4) establishing screening level WET testing at a minimum frequency of twice per year using the mysid shrimp (acute) and sea urchin (chronic). Surveillance tests shall be conducted in a different calendar quarter than the previous test. For screening level tests, one test shall be conducted in the calendar period between January and June and the other test conducted six months later.

It is noted, however, that if future WET testing indicates the discharge exceeds critical water quality thresholds, this permit will be reopened pursuant to Special Condition N, *Reopening of Permit For Modification,* of this permit to establish applicable limitations and monitoring requirements.

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

Priority Pollutant Evaluation

The previous permitting action established water quality-based monthly average concentration and mass limits of 0.23 lbs./day and 21 µg/L for total arsenic based on a June 27, 2001 statistical evaluation of effluent data on file with the Department. The 6/27/01 statistical evaluation indicated that the November 17, 1997 test result had a reasonable potential (RP) to exceed the human health-based AWQC (organisms only) for arsenic. The previous permitting action also established water quality-based daily maximum concentration and mass limits of 0.85 lbs./day and 76 µg/L for total copper based on the 6/27/01 statistical evaluation. The 6/27/01 statistical evaluation indicated that the April 5, 1998 test result had a RP to exceed the acute AWQC for copper. The previous permitting action established a minimum monitoring frequency requirement of once per year for total arsenic and total copper.

The 11/1/05 statistical evaluation indicates the discharge from the Town's Main Plant has a reasonable potential to exceed the critical acute ambient water quality criterion (AWQC) threshold for total copper and the human health AWQC criterion for total arsenic. The evaluation indicates that the discharge does not exceed or have a reasonable potential to exceed the AWQC for any other parameters tested.

Department rule Chapter 530 Section 3 states, *"the Department shall establish appropriate discharge prohibitions, effluent limits and monitoring requirements in waste discharge licenses if a discharge contains pollutants that are or may be discharged at levels that cause, have reasonable potential to cause, or contribute to an ambient excursion in excess of a numeric or narrative water quality criteria or that may impair existing or designated uses."*

On October 9, 2005, a new Department rule, Chapter 584, *Surface Water Quality Criteria for Toxic Pollutants*, became effective. The rule establishes ambient water quality criteria for toxic pollutants in surface waters of the State. The marine acute AWQC for copper was revised from 2.9 µg/L, which was the basis for the previous total copper limits, to 5.78 µg/L. The human health-based AWQC for arsenic was revised from 0.14 µg/L, which was the basis for the previous total arsenic limits, to 0.028 µg/L.

Department rule Chapter 530 Section 4.C. requires that the background concentration of specific chemicals must be included in all calculations based on a published list of default background concentrations for specific pollutants on a regional, watershed or statewide basis. For pollutants not listed by the Department, an assumed concentration of 10% of the applicable water quality criteria must be used in calculations. The Department has not published site-specific background copper or arsenic values for the receiving water, the Atlantic Ocean at Frenchman Bay. Therefore, this permitting action assumes the default 10% of applicable AWQC in calculating effluent limitations for copper and arsenic, which is illustrated in the calculations below. Additionally, Department rule Chapter 530 Section 4.E. requires the Department to hold a portion of the total assimilative capacity for toxic pollutants in an unallocated reserve to allow for new or changed discharges and non-point source contributions. The water quality reserve must not be less than 15% of the

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

total assimilative quantity. The Department has not assigned specific allocations for dischargers to Frenchman Bay. Therefore, this permitting action reserves the default value of 15% of the total assimilative capacity in calculating effluent limitations for copper and arsenic, which is illustrated in the calculations below.

Total Copper

The applicable acute copper criterion for marine waters following deductions for background and reserve as required by Department rule Chapter 530 may be calculated as follows:

Applicable Criterion = Acute AWQC – 25% (10% for background, 15% for reserve)

Applicable Criterion = 5.78 µg/L X 0.75 = 4.34 µg/L

End-of-pipe (EOP), water quality-based, daily maximum concentration and mass limits for total copper may be calculated as follows:

EOP Acute Concentration Threshold = (Applicable Criterion)(Acute Dilution Factor)

EOP Acute Concentration Threshold = (4.34 µg/L)(16.5) = 71.6 µg/L

EPA's Technical Support Document For Water Quality Based Toxics Control, dated March 1991, Chapter 5, Section 5.7 recommends that permit limits on both mass and concentration be specified for effluents discharging into waters with less than 100 fold dilution to ensure attainment of water quality standards. So as not to penalize facilities for operating at flows less than the permitted design flow of the wastewater treatment plant, the Technical Support Document recommends allowing the concentration based limits to vary in accordance with flow reductions. In addition, 40 CFR, Part 133.101(f) authorizes a permit/license writer to increase the calculated end-of-pipe concentrations limits by a factor of 1.5 which represents effluent concentration limits that are achievable through proper operation and maintenance of the treatment plant. This factor of 1.5 is shown in the sample calculation below.

EOP Concentration Limit Formula = (EOP Concentration Threshold)(1.5)

Daily Max. EOP Copper Concentration Limit = (71.6 µg/L)(1.5) = **107 µg/L**

EOP Mass Limit Formula = (EOP Conc. Threshold)(8.34 lbs./gallon)(discharge flow limit, MGD)

Daily Max. EOP Copper Mass Limit = $\frac{(76.0\ \mu g/L)(8.34\ lbs./gallon)(2.0\ MGD)}{1000\ \mu g/mg}$ = **1.3 lbs./day**

6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

Total Arsenic

The applicable human health-based arsenic criterion for marine waters following deductions for background and reserve as required by Department rule Chapter 530 may be calculated as follows:

Applicable Criterion = Human Health AWQC – 25% (10% for background, 15% for reserve)

Applicable Criterion = 0.028 µg/L X 0.75 = 0.021 µg/L

End-of-pipe (EOP), water quality-based, monthly average concentration and mass limits for total arsenic may be calculated as follows:

EOP Human Health Concentration Threshold = (Applicable Criterion)(Harmonic Mean Dilution)

EOP Human Health Concentration Threshold = (0.021 µg/L)(100) = 2.1 µg/L

EOP Concentration Limit Formula = (EOP Concentration Threshold)(1.5)

Monthly Average EOP Arsenic Concentration Limit = (2.1 µg/L)(1.5) = **3.2 µg/L**

Monthly Avg. EOP Arsenic Mass Limit = $\frac{(3.2\ \mu g/L)(8.34\ lbs./gallon)(2.0\ MGD)}{1000\ \mu g/mg}$ = **0.05 lbs./day**

This permitting action is carrying forward the minimum monitoring frequency requirement of once per year (1/Year) for total copper and total arsenic.

7. ANTIDEGRADATION

Maine law, 38 M.R.S.A. §464(4)(F) contains what is referred to as the State's antidegradation policy. The Department has determined that the action of eliminating the numeric limit for sea urchin based on the results of facility testing, and revising the daily maximum concentration and mass limits for total copper to limits that are less stringent than those established in the previous permit and which action is based on revised ambient water quality criteria for copper, is appropriate and justified at this time and will not cause or contribute to the failure of the receiving waterbody to meet the standards of its assigned water quality classification.

8. DISCHARGE IMPACT ON RECEIVING WATER QUALITY

As permitted, the Department has determined the existing water uses will be maintained and protected and the discharge will not cause or contribute to the failure of the Atlantic Ocean (Frenchman Bay) to meet standards for Class SB classification.

9. PUBLIC COMMENTS

Public notice of this application was made in the *Mount Desert Islander* newspaper on or about July 28, 2005. The Department receives public comments on an application until the date a final agency action is taken on the application. Those persons receiving copies of draft permits shall have at least 30 days in which to submit comments on the draft or to request a public hearing, pursuant to Chapter 522 of the Department's rules.

10. DEPARTMENT CONTACTS

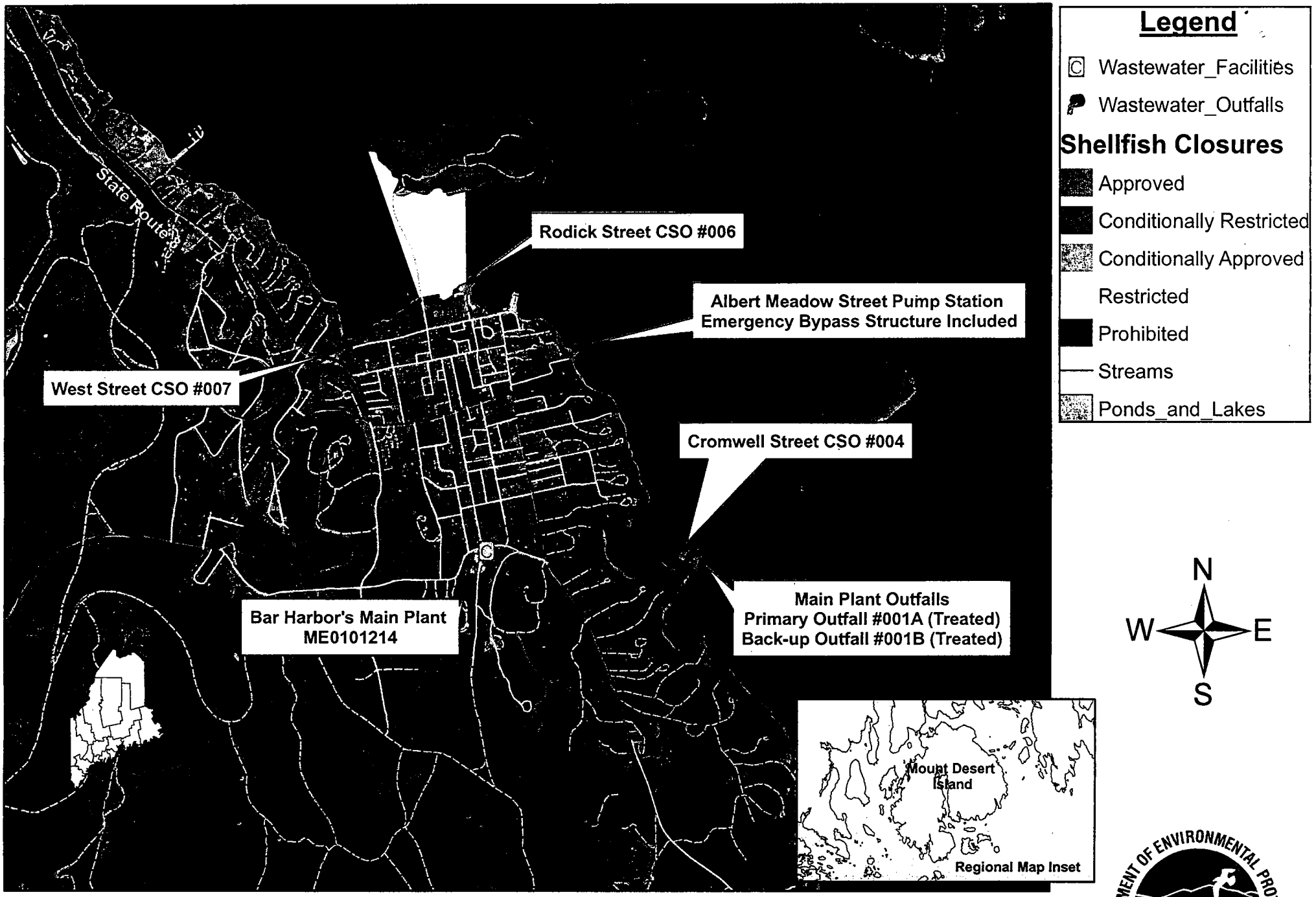
Additional information concerning this permitting action may be obtained from, and written comments sent to:

William F. Hinkel
Division of Water Resource Regulation
Bureau of Land & Water Quality
Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017 Telephone: (207) 287-7659

11. RESPONSE TO COMMENTS

Reserved.

ATTACHMENT A

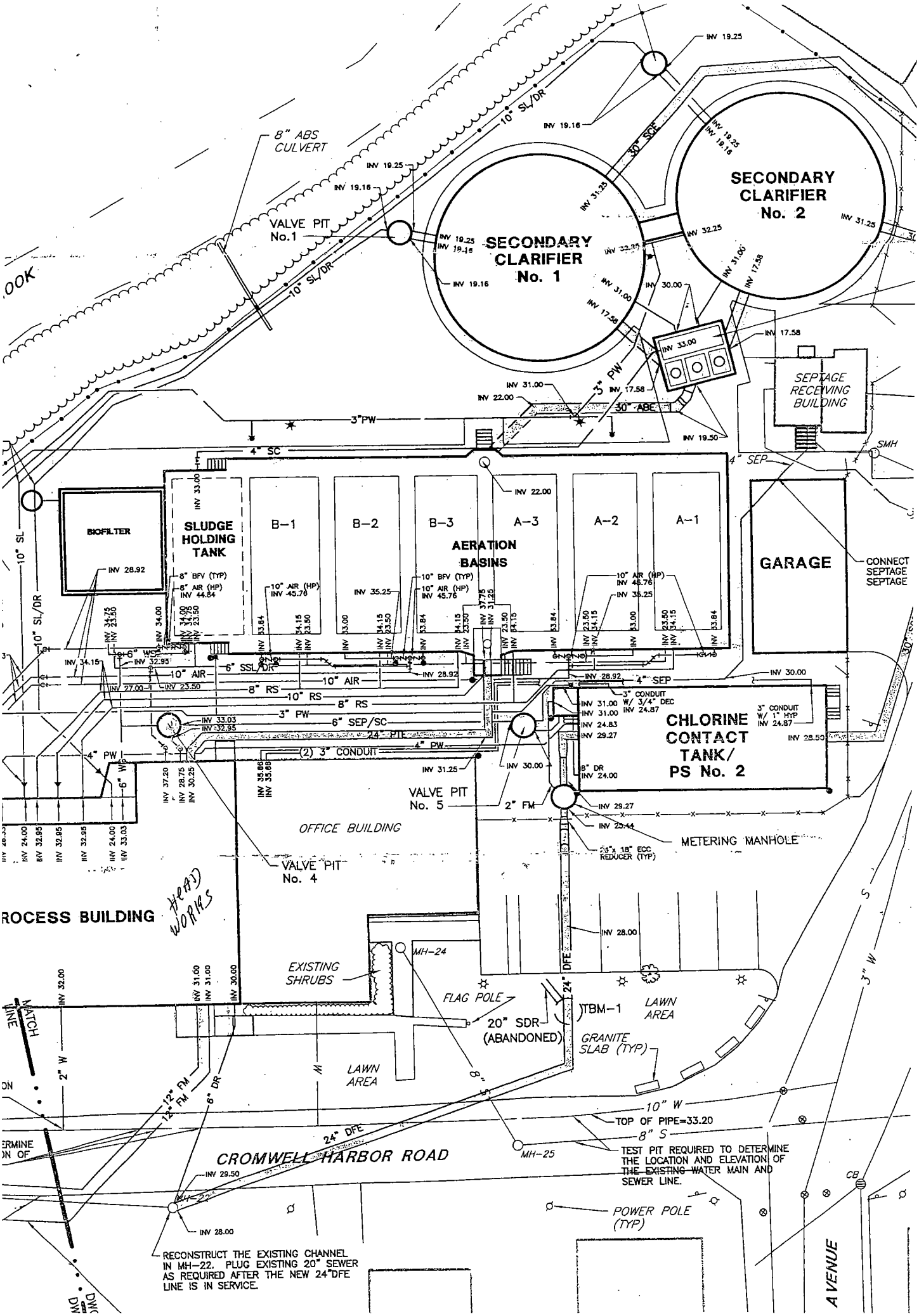


Bar Harbor, Maine

Map created by Bill Hinkel
Division of Water Resource Regulation
Maine Department of Environmental Protection
July 12, 2005

DEPARTMENT OF ENVIRONMENTAL PROTECTION
STATE OF MAINE

ATTACHMENT B


8" ABS CULVERT
VALVE PIT No.1
SECONDARY CLARIFIER No. 1
SECONDARY CLARIFIER No. 2
10" SL/DR
30" SCE
3" PW
30" ABE
SEPTAGE RECEIVING BUILDING
SMH
4" SEP
CONNECT SEPTAGE SEPTAGE
4" SC
BIOFILTER
SLUDGE HOLDING TANK
B-1
B-2
B-3
A-3
A-2
A-1
AERATION BASINS
GARAGE
10" SL
6" WS
6" SSL/DR
10" AIR
8" RS
10" RS
3" PW
6" SEP/SC
24" PIT
4" PW
(2) 3" CONDUIT
CHLORINE CONTACT TANK/ PS No. 2
3" CONDUIT W/ 3/4" DEC
3" CONDUIT W/ 1" HYP
8" DR
VALVE PIT No. 5
2" FM
METERING MANHOLE
OFFICE BUILDING
VALVE PIT No. 4
PROCESS BUILDING
HEAD WORKS
EXISTING SHRUBS
MH-24
FLAG POLE
TBM-1
LAWN AREA
20" SDR (ABANDONED)
GRANITE SLAB (TYP)
MATCH LINE
2" W
12" FM
6" DR
10" W
TOP OF PIPE=33.20
8" S
24" DFE
CROMWELL HARBOR ROAD
MH-25
TEST PIT REQUIRED TO DETERMINE THE LOCATION AND ELEVATION OF THE EXISTING WATER MAIN AND SEWER LINE.
CB
POWER POLE (TYP)
RECONSTRUCT THE EXISTING CHANNEL IN MH-22. PLUG EXISTING 20" SEWER AS REQUIRED AFTER THE NEW 24"DFE LINE IS IN SERVICE.
AVENUE

ATTACHMENT C

Species	Test	Test Result %	Sample Date	
SILVER SIDE	C_NOEL	100	10/08/2000	
SILVER SIDE	LC50	>100	10/08/2000	
MYSID SHRIMP	A_NOEL	100	04/16/2001	
MYSID SHRIMP	LC50	>100	04/16/2001	SURV 1
SEA URCHIN	C_NOEL	25	04/16/2001	
SILVER SIDE	A_NOEL	100	04/16/2001	
SILVER SIDE	C_NOEL	100	04/16/2001	
SILVER SIDE	LC50	>100	04/16/2001	
SEA URCHIN	C_NOEL	25.0	10/15/2001	SURV1 2ND
MYSID SHRIMP	A_NOEL	100	03/10/2002	
MYSID SHRIMP	LC50	>100	03/10/2002	SURV 2
SEA URCHIN	C_NOEL	100	03/10/2002	
SILVER SIDE	A_NOEL	100	03/10/2002	
SILVER SIDE	C_NOEL	100	03/10/2002	
SILVER SIDE	LC50	>100	03/10/2002	
SEA URCHIN	C_NOEL	100	09/02/2002	SURV2 2ND
MYSID SHRIMP	A_NOEL	75.0	02/02/2003	
MYSID SHRIMP	LC50	<100	02/02/2003	SURV 3
SEA URCHIN	C_NOEL	100	02/02/2003	
SILVER SIDE	A_NOEL	47.5	02/02/2003	
SILVER SIDE	C_NOEL	100	02/02/2003	
SILVER SIDE	LC50	>100	02/02/2003	
SEA URCHIN	C_NOEL	100	10/13/2003	SURV3 2ND
MYSID SHRIMP	A_NOEL	100	01/11/2004	
MYSID SHRIMP	LC50	>100	01/11/2004	SURV 4
SEA URCHIN	C_NOEL	100	01/11/2004	
SILVER SIDE	A_NOEL	100	01/11/2004	
SILVER SIDE	C_NOEL	25	01/11/2004	
SILVER SIDE	LC50	>100	01/11/2004	
SEA URCHIN	C_NOEL	5.6	09/06/2004	SURV 4 2ND
SEA URCHIN	C_NOEL	100	10/31/2004	SCREEN 1ST
MYSID SHRIMP	A_NOEL	100	01/30/2005	
MYSID SHRIMP	LC50	>100	01/30/2005	SCREEN
SEA URCHIN	C_NOEL	100	01/30/2005	
SILVER SIDE	A_NOEL	100	01/30/2005	
SILVER SIDE	C_NOEL	100	01/30/2005	
SILVER SIDE	LC50	>100	01/30/2005	

testing for 2001 WDL

MISSING 1 SHRIMP TEST
NO RP OR EXCEED

ATTACHMENT D

Sample Date: 05/07/2000
Plant flows provided

Total Tests:	132	mon.(MGD)=	1.290
Missing Compounds:	0	day(MGD)=	1.100
Tests With High DL:	0		

M = 0 V = 0 A = 0
BN = 0 P = 0 other = 0

Sample Date: 04/16/2001
Plant flows provided

Total Tests:	131	mon.(MGD)=	1.400
Missing Compounds:	1	day(MGD)=	1.100
Tests With High DL:	0		

M = 0 V = 0 A = 0
BN = 0 P = 0 other = 0

Sample Date: 03/10/2002
Plant flows provided

Total Tests:	132	mon.(MGD)=	1.570
Missing Compounds:	1	day(MGD)=	1.400
Tests With High DL:	0		

M = 0 V = 0 A = 0
BN = 0 P = 0 other = 0

Sample Date: 02/02/2003
Plant flows provided

Total Tests:	131	mon.(MGD)=	1.000
Missing Compounds:	1	day(MGD)=	0.950
Tests With High DL:	0		

M = 0 V = 0 A = 0
BN = 0 P = 0 other = 0

Sample Date: 02/02/2004
Plant flows provided

Total Tests:	123	mon.(MGD)=	0.620
Missing Compounds:	1	day(MGD)=	0.610
Tests With High DL:	0		

M = 0 V = 0 A = 0
BN = 0 P = 0 other = 0

Sample Date: 01/30/2005
Plant flows provided

Total Tests:	131	mon.(MGD)=	1.570
Missing Compounds:	1	day(MGD)=	1.650
Tests With High DL:	32		

M = 0 V = 0 A = 7
BN = 1 P = 24 other = 0

PP Data for "Hits" Only

BAR HARBOR (MAIN PLANT)
ATLANTIC OCEAN

ARSENIC
MDL = 5 ug/l

	Conc, ug/l	MDL	Sample Date	Date Entered
	2.000000	OK	03/10/2002	05/20/2002
	2.000000	OK	02/02/2004	04/13/2004
<	1.000000	OK	05/07/2000	07/19/2000
<	1.000000	OK	01/30/2005	05/23/2005
<	1.000000	OK	02/02/2003	04/24/2003
<	1.000000	OK	04/16/2001	06/25/2001

COPPER
MDL = 3 ug/l

	Conc, ug/l	MDL	Sample Date	Date Entered
	3.000000	OK	02/02/2004	04/13/2004
	3.000000	OK	01/11/2004	03/01/2004
	4.000000	OK	09/06/2004	05/23/2005
	6.000000	OK	10/13/2003	12/01/2003
	6.000000	OK	10/08/2000	12/15/2000
	6.000000	OK	05/07/2000	07/14/2000
	7.000000	OK	04/16/2001	06/25/2001
	8.000000	OK	02/02/2003	04/24/2003
	8.000000	OK	03/10/2002	05/20/2002
	11.000000	OK	01/30/2005	05/16/2005
	14.000000	OK	02/08/2000	07/05/2000
	30.000000	OK	10/15/2001	01/22/2002
	32.000000	OK	12/04/2000	01/09/2001
	48.000000	OK	09/02/2002	11/19/2002